

**REMARKS**

Claims 1-46 were pending and rejected in the Office Action. The specification starting at the paragraph beginning on page 14, line 22 and ending at page 15, line 10 has been amended. Dependant Claims 19, 21, 33, 35, 40, 42, 44, and 46 have been amended. Claims 20, 34, 41, and 45 have been cancelled. Thus, Claims 1-19, 21-33, 35-40, 42-44, and 46 are currently pending upon entry of this amendment. Favorable reconsideration is respectfully requested in light of the following Remarks. No new matter has been added.

I. Formal Matters and Drawings

1. It is respectfully requested that the United States Patent and Trademark Office change the Attorney Docket Number on the cover page of the Office Action to reflect the current Attorney Docket Number of record, 00-VE12.24, not the previous Attorney Docket number, 50107-461.

2. The amendment to the specification is directed to the paragraph starting at page 14, line 22 and ending at page 15, line 10. More specifically, the reference numeral for the regenerator on page 15, line 9, should be reference numeral "332", not "336."

3. Submitted herewith are four sheets (Figs. 1-4) of formal drawings to replace the informal drawings of record. The drawings submitted herewith include corrections in response to the objections set forth in Paper No. 6. Please enter these drawings into the official record of this application.

II. The Claims Define Patentable Subject Matter

1. The Office Action rejects Claims 21, 35, 42, and 46 under 35 U.S.C. § 112, first paragraph, as containing subject matter which is not enabled by the specification. Applicant has amended Claims 21, 35, 42, and 46 in order to replace the claim language '*the physical dimensions are less than substantially 13.5mm in length and less than substantially 14mm in height*' with clearer claim language reciting '*the circuit card includes a 56 pin pin-out*' in order to clearly point out the subject matter of the invention. Support for '*the circuit card includes a 56 pin pin-out*' may be found at page 9, lines 11-14 of the originally filed specification. For at least this reason, Claims 21, 35, 42, and 46 are in allowable form. Withdrawal of the rejection is

respectfully requested.

2. The Office Action rejects Claims 19-21, 33-35, 41-42, and 44-46 under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicant has cancelled Claims 20, 34, 41, and 45. Applicant has amended Claims 19, 33, 40, and 44 to clearly indicate that the previous "*circuit card specification*" now reads as "*Network Communication Terminal Equipment (NCTE) Standard 200-type or 400-type circuit card.*" For at least this reason, Claims 19, 21, 33, 35, 40, 42, 44, and 46 are in allowable form. Withdrawal of the rejection is respectfully requested. Support for the amendment may be found at least at page 9, lines 7-19 of the originally filed specification.

3. The Office Action rejects Claims 1, 6-8, 10, 11, 15-17 and 19-21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,521,977 to Bergstrom et al. ("Bergstrom"). Applicant respectfully traverses the rejection.

Regarding independent Claim 1, Applicant respectfully points out that Bergstrom does not include at least:

- a first selectably-activated loopback circuit which, when activated, provides a third signal transmission path between the first input port and the second output port;
- a second selectably-activated loopback circuit which, when activated, provides a fourth signal transmission path between the second input port and the first output port; and
- a controller coupled with the first and second selectably-activated loopback circuits configured to selectively activate the first and second selectably-activated loopback circuits individually and simultaneously.

The Office Action indicates that these features are disclosed by Bergstrom at element numbers 924, 926, and 930 of Figure 6. Applicant respectfully disagrees. Referring to Bergstrom's explicitly-stated specification at col. 8, lines 12-16, Bergstrom only discloses "*At blocks 924-926, the ASIC 66 provides selector logic to maintain appropriate loopback conditions. An interface for the integral communication between the ASIC 66 and the microprocessor 68 of the present invention is shown at block 930.*" Even if one were to interpret the 924 and 926 blocks

as first and second loopback circuits, which they are not, one could not arrive at the Applicant's claimed invention from Bergstrom's teaching of 'appropriate loopback conditions' at col. 8, lines 13-14. Even further, Bergstrom does not even disclose, teach, or suggest the functionality of the claimed controller configured to selectively activate the first and second selectably-activated loopback circuits individually and simultaneously. Additionally, by comparing Bergstrom's actual circuit diagram at Figure 5 and the present invention's circuit diagram at Figure 3, it is quite clear that Bergstrom does not illustrate, teach, disclose or suggest two loopback circuits connected to the controller.

Thus, Bergstrom clearly fails to disclose or suggest the Applicant's claimed invention. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. See MPEP §2131. For at least this reason, Independent Claim 1 is allowable over the applied art. Claims 6-8, 10, 11, 15-17, 19, and 21, which depend from Claim 1, are also allowable over the applied art. Withdrawal of the rejection is respectfully requested.

4. The Office Action rejects dependant Claims 2, 5, 9, 12-14, and 18 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of Noran Tel NTI-95008-SIJ (9508-07A Data Sheet, and Tech: 95008 Technical Practices ("SIJ")). The rejection is respectfully traversed.

Applicant agrees with the Office Action that Bergstrom does not disclose "*the second regenerator*" (see Office Action at page 7, lines 12-13). The Office Action attempts to show this feature in the second from last bullet point in SIJ, which states, "*receive channel to customer may be regenerative or passive DIP switch selectable*." Applicant respectfully submits that this does not disclose, teach, or suggest "*a second signal transmission path further comprising a second signal regenerator*," as recited in dependant Claim 2.

Even further, after further examination of SIJ document by the Applicant, the sixth bullet point from the top of the document also recites: "*Loopback to the network can be passive or regenerative (DIP switch selectable). CPE loopback is passive only*." Conversely, as taught by the present invention, regeneration is provided toward the customer-side local T1 span in both directions by using first and second regenerators 316, 332. More specifically, if "legacy operation" of the repeater 110 is desired, then regenerator 316 can be selectively disabled (or bypassed) by a switch 317, and, if regenerator 316 is not enabled, weak signals may be received error free via enabling the second regenerator 332. See: page 7, lines 4-5 and page 15, lines 2-10

of the Applicant's originally-filed specification. Because the present invention provides regeneration in both directions on the local, customer-side of the T1 span (i.e. CPE side) loopback is essentially "*passive or regenerative*," depending on the state of the switch 317. Thus, SIJ actually *teaches away* from the claimed invention because, as specifically recited by SIJ, CPE loopback is passive only (i.e. never enabled or regenerative).

Additionally, Applicant respectfully points to the abstract of SIJ prior to the bullet points. The abstract states, "*The SIJ is located on the customer premises and serves as the Telco's demarcation point, or network interface to the customer.*" In view of this, Applicant respectfully points to Figure 1 of the present invention, which discloses the inventive repeater 110 that includes the claimed "*second signal transmission path further comprising a second signal regenerator.*" As seen in Figure 1, the repeater 110 is remote from and not even part of the point of demarcation, seen at reference numeral 122. Therefore, if one skilled in the art were to substitute the SIJ in the Applicant's point of demarcation 122, one would still not arrive at the present invention because the second signal regenerator would essentially appear at the point of demarcation 122 and not at the repeater 110 as shown in Figure 1. In summary, the Examiner's rejection of claims 2, 5, 9, 12-14, and 18 under 35 USC §103(a) is improper for at least two reasons. Firstly, SIJ teaches away from the claimed invention. Secondly, even assuming, for the sake of argument, that SIJ teaches everything that the Examiner asserts, the combination of SIJ and Bergstrom renders an invention different from that defined in the claims. Because the combination of Bergstrom and SIJ does not teach or suggest the claimed invention, the Office Action clearly fails to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claims 2, 5, 9, 12-14, and 18 is respectfully requested.

5. The Office Action rejects dependant Claim 3 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of SIJ, and in further view of U.S. 5,422,929 to Hurst et al. ("Hurst"). The rejection is respectfully traversed.

Applicant agrees with the Office Action that Bergstrom fails to teach "*a multi-position switch that activates the first signal regenerator when in a first position and de-activates the first signal generator when in a second position.*" See: Office Action at page 10, lines 9-11. The Office Action attempts to show this feature in Hurst at reference numeral 64 in Figure 2B. However, after further examination of Hurst's specification, reference numeral 64 is merely current sensor including a switch 64' connected to a power line 62, which establishes a 60mA

simplex current for the repeater 28. See: col. 5, line 34 – col. 6, line 2. Applicant respectfully submits that this structure as recited by Hurst is not “*a multi-position switch which activates the first signal regenerator when in a first position and de-activates the first signal regenerator when in a second position,*” as recited by the claim. Thus, for the foregoing reason a combination of Bergstrom in view of SIJ and further in view of Hurst does not disclose or suggest the subject matter of claim 3. Moreover, even if we take Hurst in a light most favorable to the Examiner’s position, Hurst does not rectify the deficiencies of Bergstrom and SIJ as recited above in Section II, sub-section 4. Therefore, because Claim 3 depends from independent Claim 1, Claim 3 is also in allowable form. Because the combination of Bergstrom, SIJ, and Hurst does not disclose, teach, or suggest the claimed invention, as recited in independent Claim 1, the Office Action clearly fails to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claim 3 is respectfully requested.

6. The Office Action rejects dependant Claim 4 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of SIJ, and in further view of Draft Revision of t1.408 (T1E1.2/98-007) (“Draft T1.408”). The rejection is respectfully traversed.

Applicant agrees with the Office Action that SIJ fails to teach “*the fourth transmission path further comprises the second signal regenerator when the second selectably activated loopback circuit is activated.*” See: Office Action at page 11, lines 1-2. The Office Action attempts to show this feature in Draft T1.408. Regardless, Draft T1.408 still does not overcome the deficiencies of Bergstrom and SIJ as recited above in Section II, sub-section 4. Therefore, because Claim 4 depends from independent Claim 1, Claim 4 is also in allowable form. Because the combination of Bergstrom, SIJ, and Draft T1.408 does not disclose, teach, or suggest the claimed invention, as recited in independent Claim 1, the Office Action clearly fails to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claim 4 is respectfully requested.

7. The Office Action rejects Claims 22-23, 25, and 27-35 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of SIJ. The rejection is respectfully traversed.

Applicant agrees with the Office Action that Bergstrom fails to teach “*connection to a local network span connected with customer premises equipment and a second signal*

*regenerator.*” See: Office Action at page 12, lines 16-17. The Office Action attempts to show this feature in SIJ. Regardless, SIJ still does not overcome the deficiencies of Bergstrom as recited above in Section II, sub-section 3. Therefore, because Claims 23, 25, 27-33, and 35 depend from independent Claim 22, Claims 23, 25, 27-33, and 35 are also in allowable form. Because the combination of Bergstrom and SIJ does not disclose, teach, or suggest the claimed invention, as recited in independent Claim 22, the Office Action clearly fails to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claims 22-23, 25, and 27-33, and 35 is respectfully requested.

8. The Office Action rejects dependant Claims 24 and 26 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of SIJ and in further view of U.S. 5,343,461 to Barton et al. The rejection is respectfully traversed.

Applicant agrees with the Office Action that Bergstrom fails to teach “*a plurality of formats.*” See: Office Action at page 16, lines 9-10. The Office Action attempts to show this feature in Barton. Regardless, Barton still does not overcome the deficiencies of Bergstrom as recited above in Section II, sub-section 4. Therefore, because Claims 24 and 26 depend from independent Claim 22, Claims 24 and 26 are also in allowable form. Because the combination of Bergstrom, SIJ, and Barton does not disclose, teach, or suggest the claimed invention, as recited in independent Claim 22, the Office Action clearly fails to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claims 24 and 26 is respectfully requested.

9. The Office Action rejects Claims 36 and 38-42 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of SIJ. The rejection is respectfully traversed.

Applicant agrees with the Office Action that Bergstrom fails to teach “*a second signal transmission path comprising a second signal regenerator.*” See: Office Action at page 17, lines 14-15. The Office Action attempts to show this feature in SIJ. Regardless, SIJ still does not overcome the deficiencies of Bergstrom as recited above in Section II, sub-section 3. Therefore, because Claims 38-40 and 42 depend from independent Claim 36, Claims 38-40 and 42 are also in allowable form. Because the combination of Bergstrom and SIJ does not disclose, teach, or suggest the claimed invention, as recited in independent Claim 36, the Office Action clearly fails

to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claims 36 and 38-40 and 42 is respectfully requested.

10. The Office Action rejects dependant Claim 37 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of SIJ and in further view of Hurst. The rejection is respectfully traversed.

Applicant agrees with the Office Action that Bergstrom fails to teach “*a multi-position switch that activates the first signal regenerator when in a first position and de-activates the first signal generator when in a second position.*” See: Office Action at page 19, lines 19-21. The Office Action attempts to show this feature in Hurst. Regardless, Hurst still does not overcome the deficiencies of Bergstrom and SIJ as recited above in Section II, sub-section 4. Therefore, because Claim 37 depends from independent Claim 36, Claim 37 is also in allowable form. Because the combination of Bergstrom, SIJ, and Hurst does not disclose, teach, or suggest the claimed invention, as recited in independent Claim 36, the Office Action clearly fails to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claim 37 is respectfully requested.

11. The Office Action rejects Claims 43-46 under 35 U.S.C. §103(a) as being unpatentable over Bergstrom in view of SIJ. The rejection is respectfully traversed.

Applicant agrees with the Office Action that Bergstrom fails to teach “*jacks.*” See: Office Action at page 21, lines 13-14. The Office Action attempts to show this feature in SIJ. Regardless, SIJ still does not overcome the deficiencies of Bergstrom as recited above in Section II, sub-section 3. Therefore, because Claims 44 and 46 depend from independent Claim 43, Claims 44 and 46 are also in allowable form. Because the combination of Bergstrom and SIJ does not disclose, teach, or suggest the claimed invention, as recited in independent Claim 43, the Office Action clearly fails to establish a prima facie case of obviousness (See MPEP §2143). Withdrawal of the rejection of Claims 43, 44 and 46 is respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 07-2347, under Order No. 00-VE12.24 from which the undersigned is authorized to draw. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made; please charge the above account number for any such fees. The Examiner is invited to telephone the undersigned at the number indicated below if it is believed that a telephone conversation may serve to advance the prosecution of this application.

Dated: February 6, 2004

Respectfully submitted,

By

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